I026792

Bayer CropScience

BAYER -001

August 11, 2014

Document Processing Desk 6(a)(2)
Office of Pesticide Programs (7504P)
U. S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202-4501

RE: 6(a)(2) Follow-Up Report Of Alleged Bee Incident In Esmond, IL

Updates IO26469

Dear Sir/Madam:

Bayer CropScience ("BCS"), in response to Mr. Steven Bradbury's July 22, 2013 letter, is submitting follow-up information regarding the details of an alleged bee incident in Esmond, IL initially reported to EPA on May 23, 2014 involving a product containing the active ingredient Clothianidin.

Bayer CropScience
RTP
P. O. Box 12014
RTP, NC 27709
Tel. 919 549-2000

The information with this letter is being submitted to the EPA pursuant to EPA's interpretation of requirements imposed on registrants by Section 6(a)(2) of FIFRA. This information does not necessarily constitute additional factual information regarding potential unreasonable adverse effects within the meaning of 6(a)(2). It is being submitted to enable EPA to make its own assessment of the information.

If you have questions or concerns, please feel free to contact me at any time.

Sincerely,

Sundee K Williams

Sundee Williams
AE Compliance Manager
Bayer CropScience
North American Knowledge & Information Management
(919)549-2255

CC:
Meredith Laws, US EPA Insecticide Branch Chief
AE Coordinator, CA Department of Pesticide Regulation
Jeanine Broughel, NY Department of Environmental Conservation

Attachment(s):
Incident Report

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Final Report

Investigation of the bee incident in Esmond, IL, on 5 May 2014

Report Number
IL-[redacted]-140505-01

Guideline Requirements

None

Author

David L. Fischer

Completion Date

8 August 2014

Submitter:

Bayer CropScience LP

2 T.W. Alexander Drive

Research Triangle Park, North Carolina 27709

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1. Background

On May 5, Bayer CropScience was notified of an incident of high bee mortality observed by [redacted] at their apiary located in the vicinity of Esmond, Ogle County, IL. [redacted] reported that on May 5, shortly after nearby cornfields were planted, all six of the hives in this apiary were exhibiting greater than normal levels of bee mortality.

2. Investigative Actions

2.1 Field Methods:

Mr. Mark O'Rourke, Bayer CropScience, visited the apiary of [redacted] on May 8, 2014. Mr. O'Rourke inspected the affected hives and noticed one in particular had several dead bees at the entrance (Fig. 1). He noted the presence of a recently planted cornfield bordered by a non-cropped area containing blooming dandelions in close proximity to the apiary location (Fig. 2). Mr. O'Rourke collected 2 samples of dead bees as well as three samples of dandelion blooms near the corn field. Digital photographs of the other affected hives were taken as well (Fig. 3). The samples were shipped the Residue Analysis Laboratory, Bayer Bee Care Center, 2 T.W. Alexander Drive, Research Triangle Park, NC 27709, using the next-day shipping service from FedEx.

2.2 Laboratory Analysis:

Upon arrival of the samples to the Residue Analysis on May 9, they were stored in appropriate conditions until processed on May 12. Each sample was transferred to individual centrifuge tubes containing zircon beads, and extracted with a modified QUECHERS method using a MiniLys bead mixer. An isotopic internal standard was added to each sample for quantitation prior to analysis by high resolution LC-MS/MS.

The analytical method identified and quantified clothianidin. Additionally, the samples were analyzed for presence of TZNG (a degradate of clothianidin), thiamethoxam, amitraz, carbaryl, atrazine and coumaphos (Table 1).

3. Results and Discussion

Residues of 10.2 and 12.5 ppb clothianidin were found in the two bee samples (Table 1). In addition, one of the samples also contained 5.1 ppb TZNG. Low levels of amitraz and atrazine were also detected. Samples of dandelion flower heads collected in the vicinity of the [redacted] apiary (Fig. 2) contained 1.9, 11.3 and 4.2 ppb clothianidin. These residues may be the result of deposition of dust containing clothianidin. The time and location of the observed bee mortality as well as the detection of 10.2-12.5 ppb clothianidin in the dead bee samples is consistent with the hypothesis that this incident was a consequence of exposure to clothianidin-laden dust released during the planting of treated seeds.

4. Tables and Figures

Table 1. Results from residue analysis of samples collected at [redacted] apiary on May 8, 2014.

Analysis of dead bee samples from Illinois incident IL-SK-140505-01 (analysis date May 12, 2014)										
				Concentration (ppb)						
Sample ID	**Collection date**	**Type of sample**	**Collected by**	**Clothianidin**	**TZNG**	**Thiamethoxam**	**Amitraz**	**Carbaryl**	**Atrazine**	**Coumaphos**
IL-SK-140505-01 Rep 1	9-May	bees	O'Rourke	10.2	<LOD	<LOD	Traces	NA	Detect	NA
IL-SK-140505-01 Rep 2	9-May	bees	O'Rourke	12.5	5.1	<LOD	Traces	NA	Detect	NA
Dead bee LODs				0.4	0.4	0.6		1.5	1.3	1.5

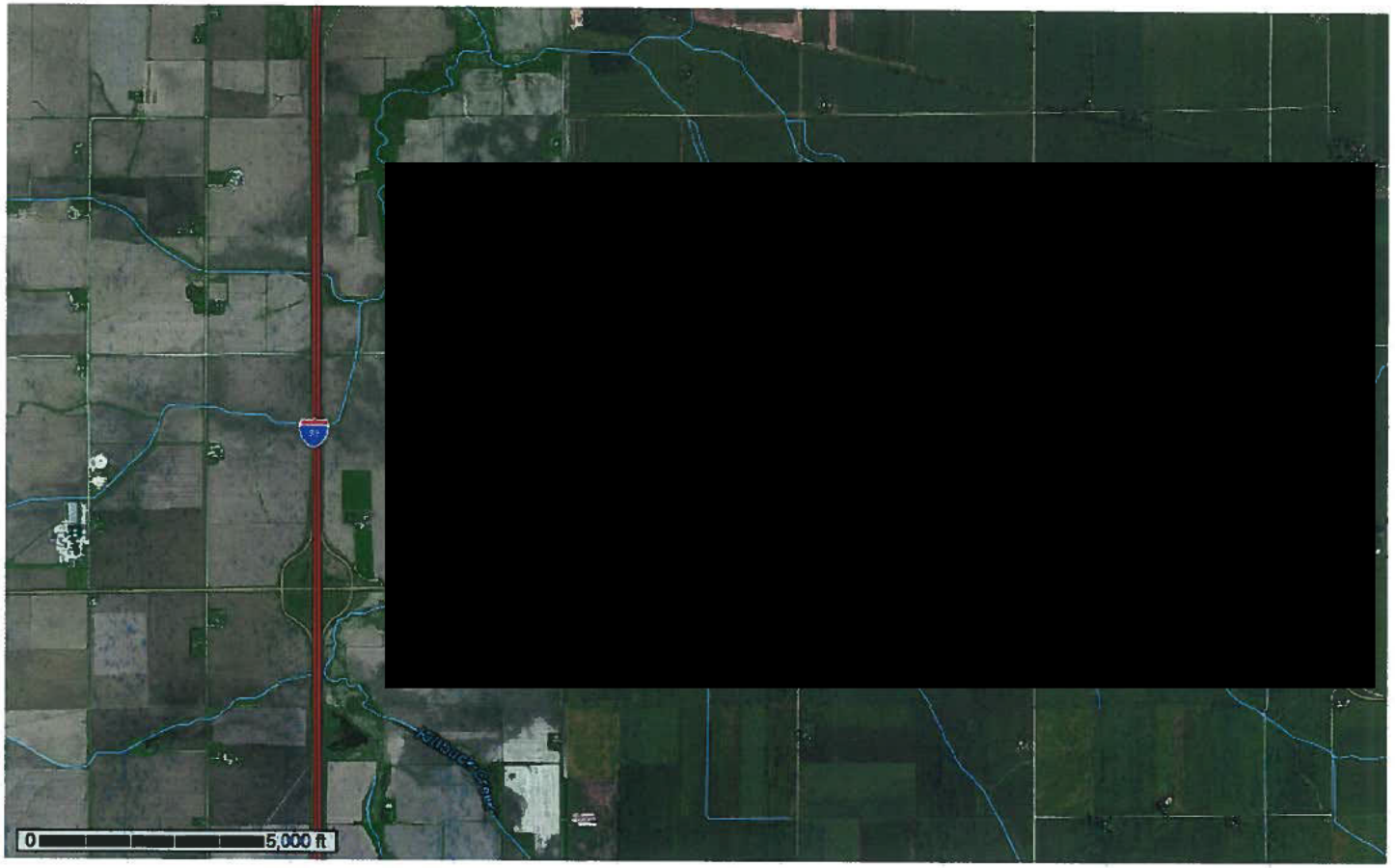
NA = not assayed
Detect = peak detected, but not quantified
T. J. Gould,
5/12/14

Fig. 1. Honey bee hive where dead bee sample was collected on May 8, 2014 at [redacted] apiary, Esmond IL.

Fig. 2. Dandelion blooms near the planted corn field and [redacted] apiary where samples were collected. Esmond, IL.

Fig. 3. Other hives in the apiary. Hive in the top left photo was near a soybean field not yet planted to the East. Hive in the top right photo was near the house to the North. Hive in bottom right photo near trees, looking north from the bee yard.

5. **Supplementary information**



Beekeeper contact information: [redacted] Esmond, IL 60129

[redacted]

Inspector contact information: [redacted]